Cabrillo College

NETWORK ADMINISTRATOR

DEFINITION

Under general supervision of the Manager of Technology Services, performs network systems design and modification, installation, implementation, programming, configuration and hardware and software selection and modification of a routine to complex nature in support of College administrative and instructional functions for wide area network, local area network and VoIP (Voice Over Internet Protocol) systems, including voice mail, data communication systems, personal computer systems, smartphones, cellular phones, and related software; and performs related duties as required or assigned.

CLASS CHARACTERISTICS

This is a professional level class with the incumbent competent to perform varied network analytical, programming, installation, configuration, implementation and design work for the college local/wide area network governing data communications among personal computers. This includes computer networks, mail and note systems and telecommunications for microcomputers and servers. Hardware platforms for clients and network servers will focus on microcomputers devices and include connectivity to various servers. Network operating systems will vary, depending upon current needs and technologies; however, these positions are characterized by the necessity of systems design, analysis, assessment, programming, user interface development and extensive documentation and training.

EXAMPLES OF DUTIES (Illustrative Only)

- Gathers and analyzes information regarding the college VoIP, local/wide area network and requirements and develops or modifies the system to support college computational needs (E)
- Installs, configures, tests, implements, upgrades, repairs, troubleshoots and maintains networking equipment including servers, routers, bridges, MAUs, repeaters, hubs, switches, cabling, peripheral communications equipment, workstations and other associated equipment necessary for network operation (E)
- Conducts feasibility studies (E)
- Develops system, hardware and cost requirements and proposed time frames (E)
- Simulates hardware and software problems, tests and evaluates alternative solutions, and recommends and implements appropriate operating systems, software applications and hardware (E)
- Modifies commercial software to meet designated needs (E)
- Designs network client interfaces that integrate data communications such as computer networks, mail and note systems and telecommunications (E)
- Documents systems and performs regular backups (E)
- Troubleshoots network hardware and operating problems, including but not limited to connectivity, internet access, electronic mail and file servers (E)
- Ensures proper installation and configures the full range of network, Ethernet, Fiber-optic and mainframe devices (E)
- Writes user procedures and instructions and assists departments and staff in implementing new or modified programs and applications (E)
- Conducts software training in an individual or organized classroom setting for College staff computer users to ensure the most effective use of hardware and software (E)
- Tracks and evaluates adopted systems and programs (E)
EXAMPLES OF DUTIES (continued)

• May direct the work of others on a project basis
• Maintains records and prepares and documents system configurations (E)
• Maintains current knowledge of new technologies and new computer applications (E)
• Maintains virus protections on a continuing basis (E)
• Designs and implements network user accounts structure for staff (E)
• Designs, implements and maintains Internet and E-mail services (E)
• Recommends hardware and software applications for assigned area of expertise (E)
• Performs related duties as required or assigned

(E) = designates essential functions

QUALIFICATIONS

Knowledge of:

• Computer programming principles, techniques and procedures for both administrative, business and academic applications
• Operating principles and characteristics of local/wide area networks, telecommunications, client server environments and personal computer hardware utilized by the College
• Network operating systems, protocols, microcomputer operating systems and related applications and utilities
• Integration of data and telecommunications
• Systems analysis and design procedures and techniques
• Techniques for instructing others in hardware and software usage
• Job planning, prioritizing and scheduling techniques
• Software applications in common use by the college staff
• Network monitoring software and procedures
• Network hardware and related equipment

Skill in:

• Analyzing networking systems and problems and developing new or modified solutions to meet changing conditions
• Analyzing network and telecommunication system requirements and selecting appropriate hardware and software solutions
• Developing logical procedures and developing tests to validate network and telecommunication configuration and efficiency
• Troubleshooting hardware and software problems and debugging network systems as required
• Preparing clear and concise documentation, user procedures, reports of work performed, and other written materials
• Translating user department needs into operational solutions
• Instructing staff in the operation of new or revised network configurations, including explaining complex concepts to non-technical users
• Exercising sound judgment within established guidelines
• Establishing and maintaining effective working relationships with those contacted in the course of work
QUALIFICATIONS (continued)

Ability to:

- Read, analyze and interpret technical manuals, procedures and instructions
- Define problem areas, collect and evaluate data, and make appropriate recommendations
- Make arithmetic calculations accurately and rapidly
- Perform moves, adds and changes on a VoIP system
- Communicate effectively, both orally and in writing
- Attend to and analyze detailed information
- Exercise discretion and safeguard the confidentiality of information
- Understand and follow oral and written directions
- Effectively interact with other staff, operating departments, and representatives from vendors
- Trace, identify, and resolve hardware and software malfunctions
- Perform complex analyses for networking and telecommunication systems
- Analyze system generated statistics and make recommendations for configuration and resource allocation
- Safely lift items weighing up to 40 pounds, such as computer and networking equipment
- Operate an automobile or comparable vehicle for personal transportation to work sites

Other requirements:

- Must be able to safely lift and move boxes and equipment weighing up to 40 pounds, and to move heavier equipment with assistance
- Must be able to crawl, bend, stoop, and work in small spaces, and walk and stand for extended periods of time
- Must possess and maintain a valid California driver's license and a safe driving record in order to drive a vehicle, including college carts
- Must be willing to work days, evenings, and weekends at various campus locations

Education and Experience:

A typical way of gaining the knowledge and skills outlined above is:

Equivalent to two years of college level course work with major course work in computer science, business procedures and accounting, mathematics, or a closely related field and three years of increasingly responsible experience in local/wide area network administration, design, implementation, configuration, monitoring, installation and troubleshooting. Similar technology experience may be substituted for the experience on a year-for-year basis.